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CONT.

a plurality of electrophoretic probes each comprising an antibody binding compound specific for a target compound, each antibody binding compound having one or more eTag reporters attached thereto by cleavable linkages such that upon cleavage of the cleavable linkages the eTag reporters from different electrophoretic probes form distinct peaks upon electrophoretic separation.

6. The kit of claim 5 further including a capture agent for separating complexes of said electrophoretic probes specifically bound to said target compounds from unbound electrophoretic probes.

7. The kit of claim 6 further including a cleaving agent for cleaving said eTag reporters from said electrophoretic probes of said complexes.

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8. The kit of claim 7 wherein said capture agent comprises a solid support having attached thereto antibody or antibody fragments that bind specifically to said one or more target compounds.

9. The kit of claim 8 wherein said cleaving agent is an enzyme.

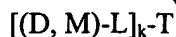
10. The kit of claim 7 wherein said cleaving agent generates an active species for cleaving said cleavable linkage.

11. The kit of claim 10 wherein said cleaving agent is a sensitizer and said active species is singlet oxygen or hydrogen peroxide.

12. The kit of claim 5 further including a second antibody binding compound specific for at least one of said one or more target compounds, the second antibody binding compound having a sensitizer attached for generating an active species.

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13. The kit according to any one of 5, 6, 7, 8, 9, 10, 11, or 12, wherein said electrophoretic probes are selected from the group defined by the formula:



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wherein:

T is said antibody binding compound specific for a target compound;

k is an integer in the range of from 1 to 20;

L is said cleavable linkage;

D is a detection group; and

M is a mobility modifier consisting of from 1 to 500 atoms selected from the group consisting of carbon, hydrogen, oxygen, sulfur, nitrogen, phosphorus, and boron.

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14. The kit of claim 13 wherein said plurality is in the range of from 5 to 100, and wherein M is a mobility modifier consisting of from 1 to 300 atoms selected from the group consisting of carbon, hydrogen, oxygen, phosphorus, nitrogen, sulfur, and boron.

15. The kit of claim 14 wherein said cleavable linkage is cleavable by oxidation and is selected from the group consisting of olefins, thioethers, sulfoxides, and selenium analogs of thioethers or sulfoxides.

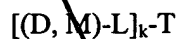
16. The kit of claim 15 wherein said detection group is a fluorescent label.

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17. The kit of claim 16 wherein said antibody binding compound is a monoclonal antibody or a polyclonal antibody; and wherein k is in the range of from 1 to 3.

18. The kit of claim 17 wherein said detection group is a fluorescein.

19. A kit of reagent pairs for detecting the presence or absence of one or more target compounds, the kit comprising a plurality of pairs of first reagents and second reagents, the first reagent and second reagent of each pair being specific for the same target compound, the first reagent of each pair being selected from the group defined by the formula:



wherein:

T is an antibody binding compound specific for a target compound,

k is an integer in the range of from 1 to 20,

L is a cleavable linkage,

D is a detection group, and

M is a mobility modifier consisting of from 1 to 500 atoms selected from the group consisting of carbon, hydrogen, oxygen, sulfur, nitrogen, phosphorus, and boron, wherein upon cleavage of L an eTag reporter is produced with a distinct charge/mass ratio so that eTag reporters of different electrophoretic probes form distinct peaks upon electrophoretic separation; and

the second reagent of each pair comprising a second antibody binding compound having a sensitizer for generating an active species to cleave the cleavable linkage.

20. The kit of reagent pairs of claim 19 wherein said plurality is in the range of from 5 to 100, and wherein M is a mobility modifier consisting of from 1 to 300 atoms selected from the group consisting of carbon, hydrogen, oxygen, phosphorus, nitrogen, sulfur, and boron.

21. The kit of reagent pairs of claim 20 wherein said cleavable linkage is selected from the group consisting of olefins, thioethers, sulfoxides, and selenium analogs of thioethers or sulfoxides.

22. The kit of reagent pairs of claim 21 wherein said detection group is a fluorescent label, and wherein said charge/mass ratio is in the range from -.001 to 0.5.

23. The kit of reagent pairs of claim 22 wherein said antibody binding compound is a monoclonal antibody or a polyclonal antibody, and wherein k is in the range of from 1 to 3.

24. The kit of reagent pairs according to claims 19, 20, 21, 22, or 23 wherein said second antibody binding compound is a monoclonal antibody or a polyclonal antibody, and wherein said active species is singlet oxygen or hydrogen peroxide.

25. The kit of reagent pairs of claim 35 wherein said sensitizer is capable of generating singlet oxygen when photoactivated.--